

REMARKS

Claims 1-11 and 45-47 are pending. Support for amended Claim 1 and new claims 46 and 47 is found throughout the specification. See for example, page 29, lines 13-36, and page 43, line 30 through page 44, line 16.

The claim amendments are presented in a revised format per the USPTO's announcement 'Amendments in a Revised Format Now Permitted', signed 31 January 2002, and accordingly do not conform to the current reading of 37 C.F.R. §1.121, which Applicant understands has been waived. Accordingly, amendments to the specification are made by presenting replacement paragraphs showing changes made by strikethrough (for deleted matter) or underlining (for added matter). A complete listing of all claims that are, or were in the application, along with an appropriate status identifier, is provided above in the section entitled "Amendments to the Claims".

Specification

The office action states that updating the status of references to U.S. serial numbers is required. Accordingly, the reference to U.S.S.N. 09/660,374 has been updated to state Patent No. 6,495,323. As U.S.S.N. 09/135,183 is still being prosecuted, the reference to this application has not been updated.

Drawings

The office action states that corrected drawings are required. However, pursuant to a telephone conference on July 11, 2003, between Examiner Siew and R. Kosslak, it was determined that the required substitute drawing, i.e., Figure 2A, was included along with the

Response to Restriction Requirement mailed November 1, 2002. Thus, the requirement to submit substitute drawings in response to the present office action is moot.

Rejection under 35 U.S.C. § 112, second paragraph

Claim 9 is rejected under 35 U.S.C. § 112, second paragraph for being indefinite for reciting the phrase “independently selected” because it is unclear as to what limitation the phrase imposes on the claim. Claim 9 has been amended to clarify the limitation imposed on the claim. Accordingly, Applicants respectfully request withdrawal of the rejection of Claim 9 under 35 U.S.C. § 112, second paragraph.

Rejection under 35 U.S.C. § 102(e)

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Bauer, U.S. Patent No. 6,096,497. Applicants respectfully disagree that claims 1-11 are anticipated under 35 U.S.C. § 102(e) by the Bauer because Bauer does not teach metallic surfaces comprising self-assembled monolayer forming species further comprising nucleic acid capture probes and asymmetric monolayers forming species.

Bauer teaches a biosensor optionally comprising either a self-assembled monolayer (SAM) or a mixed SAM in which one of the species comprises an enzyme. See column 5, line 48 through column 6, line 41, column 9, lines 38-52, and Figure 1. As shown in Figure 1 and as described in column 9, lines 38-52, the SAM taught by Bauer comprises a first SAM (20) formed on one side of a base layer (10) that is connected to the based layer by siloxane linkages. A second SAM layer (40), formed on top of the silver layer (30) and connected to the silver layer by direct chemical sulfur linkages. The second SAM layer (40) is a mixed SAM made up of two

molecules. A first molecule that is terminated with alcohol groups and a second molecule that is terminated with a group that is reactive with enzyme amino groups such that an enzyme of interest may be attached. Thus, Bauer teaches mixed SAMs in which one of the two SAM forming species comprises an enzyme.

In contrast, Claims 1-11 are directed to metallic surfaces comprising a SAM forming species to which a nucleic acid capture binding probe is attached and asymmetric monolayer forming species (AMFS). As defined in the specification at page 7, lines 31-36 and disclosed in claim 1:

As described more fully below, AMFS comprise two components, usually linked by a disulfide bridge, at least one of which is a standard monolayer forming species such as an alkyl chain, and the other is a shorter species, for example a shorter alkyl chain or a short branched chain. These two elements are put down together, for example by attaching them as a disulfide moiety that then is used to form a monolayer on a metallic surface such as gold.

Thus, the present invention discloses a metallic surface comprising two components: 1) a first component comprising a SAM forming species comprising nucleic acid capture probes; and 2) a second component comprising an AMFS.

An anticipation rejection requires that a single reference expressly or inherently disclose each and every element of a claim. *In re Paulsen*, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994); MPEP § 2131 (citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). Additionally, the reference must enable and describe the claimed invention “sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.” 31 USPQ2d at 1673. To be enabling, the reference must teach the skilled artisan how to make and use the full scope of the claimed invention without undue experimentation. See *Genentech Inc. v. Novo Nordisk A/S*, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997).

As can be seen from the above discussion, Bauer does not disclose a metallic surface comprising two components: 1) a first component comprising a SAM forming species comprising nucleic acid capture probes; and 2) a second component comprising an AMFS. . Therefore, Bauer does not teach or suggest each and every element of the claimed invention. Accordingly, Applicant respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e).

Please direct further questions in connection with this Application to the undersigned at (415) 781-1989.

Respectfully submitted,

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